

**METHOD AND APPARATUS FOR DISTRIBUTED BANDWIDTH
ALLOCATION FOR A BI-DIRECTIONAL RING MEDIA WITH
SPATIAL AND LOCAL REUSE**

ABSTRACT OF THE DISCLOSURE

5 A system and method for locally determining a fair allocated bandwidth for a network node configured to send and receive packets in an upstream direction and a downstream direction is disclosed. A local allocated bandwidth is allocated for locally generated network packets sent in the downstream direction. A minimum downstream available network bandwidth is determined from

10 information received in the upstream direction. The local allocated bandwidth is adjusted based on the minimum downstream available network bandwidth and the local allocated bandwidth is used to govern whether a class of locally generated network packets are sent in the downstream direction.